

# Clarke®

## air



## 1/2" REVERSIBLE AIR DRILL

**MODEL NO: CAT123**

PART NO: 3110879

### OPERATION & MAINTENANCE INSTRUCTIONS



GC1110

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## INTRODUCTION

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Thank you for purchasing this CLARKE product.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

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## GUARANTEE

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This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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## ENVIRONMENTAL PROTECTION

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Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment.

# GENERAL SAFETY RULES



CAUTION: FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY, AND/OR DAMAGE TO PROPERTY.

## WORK ENVIRONMENT

1. Keep the work area clean and tidy.
2. Dress appropriately - Do not wear loose clothing or jewellery. Tie long hair out of the way.
3. Keep children and visitors away - Do not let children handle the air drill. Make sure that any other persons in the work area are dressed suitably and are wearing eye and ear protection.
4. Do not operate the drill where there are flammable vapours.
5. Keep the air supply hose away from heat, oil and sharp edges.
6. Do not fit the drill to any stand or clamping device that may damage it.

## USE

1. Stay alert and use common sense - Do not operate the drill when you are tired or under the influence of alcohol, drugs or medication.
2. Always wear eye protection when using the drill - Eye protectors must provide protection from flying particles from the front and the side.
3. Always wear ear protection when using the drill.
4. Do not over reach - Keep proper footing and balance at all times.
5. Never use any type of bottled gas as a source of power for the drill.
6. Do not connect the air supply hose with your finger on the trigger.
7. Do not exceed the maximum pressure for the drill: 90 psi / 6.2 bar.
8. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
9. Do not use the drill for any other purpose than that described in this book.
10. Do not carry out any alterations or modifications to the drill.
11. Always disconnect from the air supply when:
  - Performing any maintenance
  - The drill is not in use.

- The drill will be left unattended.
- Moving to another work area.
- Passing the drill to another person.

12. Never use the drill if it is defective or operating abnormally.

13. The drill should be serviced at regular intervals by qualified service personnel.

14. Avoid damaging the drill for example by applying excessive force of any kind.

15. Always maintain the drill with care. Keep it clean for best and safest performance.

16. Quick change couplings should not be located at the drill. They add weight and could fail due to vibration.

17. Do not force or misuse the drill. It will do a better and safer job at the rate for which it was designed.

18. Do not remove any labels. Damaged labels should be replaced.

19. This tool vibrates with use. Vibration may be harmful to your hands or arms. Stop using the tool if discomfort, a tingling feeling or pain occurs. Seek medical advice before resuming use.

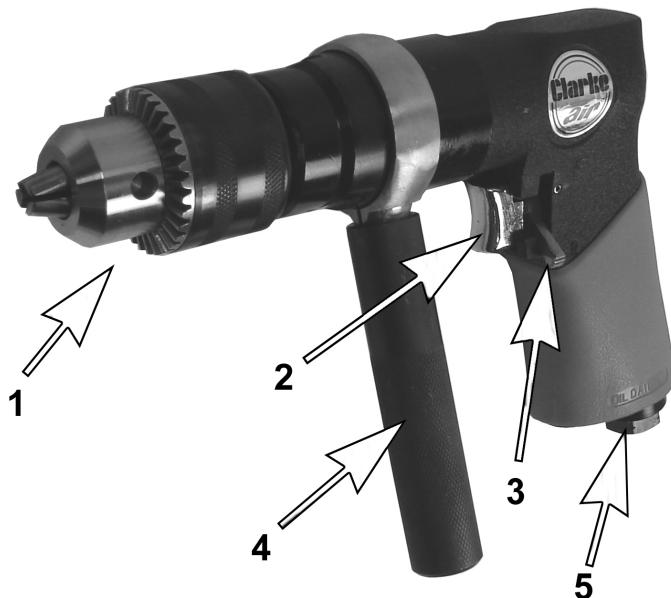
## **TRANSPORTATION**

1. Never carry the drill by the air supply hose.
2. Never carry the drill with your finger on the trigger.

## **STORAGE**

1. When not in use the drill should be disconnected from the air supply and stored in a dry place out of the reach of children (preferably in a locked cabinet).
2. Avoid storing the drill in environments where the temperature is below 0°C.

## OVERVIEW



NO	DESCRIPTION	NO	DESCRIPTION
1	Chuck	4	Handle
2	Trigger	5	Air hose connector
3	Forward/Reverse Switch		

Unpack and lay out the components, checking against the following list. Any damage or deficiency should be reported to your CLARKE dealer immediately.

- 1/2" Reversible Air Drill
- Male Snap Connector
- Bottle of Airline Oil
- Chuck Key

- Side Handle
- Side Handle Clamping Ring
- Operators Manual (this document)

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## ACCESSORIES

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A wide range of accessories are available, including Filter/Regulators, Airline Lubricators, High Pressure Hoses (5 to 50 Metres), adaptors and connectors etc.

Contact your CLARKE dealer for further information, or CLARKE International Sales Department on 01992 565 333.

# COMPRESSED AIR LINES

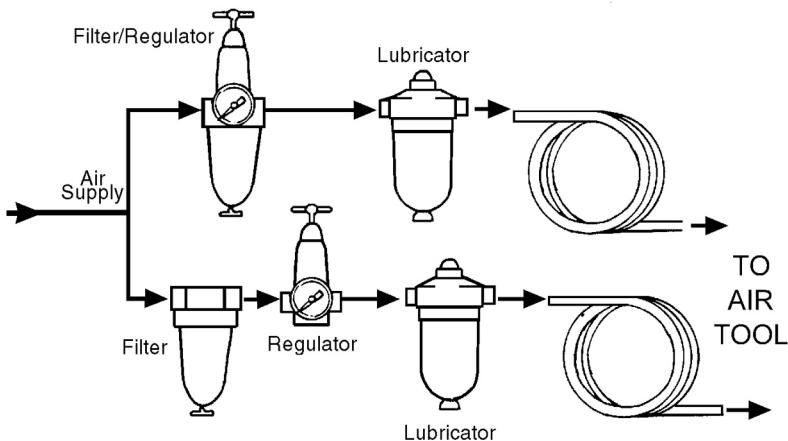
## AIR SUPPLY REQUIREMENTS



**WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND COMPRESSED AIR SUPPLY.**

- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the air drill must comply with the appropriate European Community safety directives.
- A build-up of moisture or oil in the air compressor will accelerate wear and corrosion in the air drill. Ensure any moisture is drained from the compressor daily and the inlet filter is kept clean.
- If an unusually long air hose is required, (over 8 metres), line pressure may need to be increased.
- Never exceed the maximum operating pressure for the air drill.
- The air hose must be rated at least 150% of the maximum operating pressure of the tool.

A typical airline layout is shown below. If an automatic in-line filter/regulator/lubricator unit is used it will keep the tool in good condition, but should be regularly checked and topped up with oil.



**IMPORTANT: If a filter/lubricator unit is not used, the air tool should be lubricated with 2 to 6 drops of oil, at least once a day or after 2 hours work, depending upon the working environment. The oil can be inserted through the airline connection point.**

## AIRLINE SAFETY

- Never exceed the maximum operating pressure for the tool. A pressure of 90 psi with a flow of 16 cfm is required. Too high an air pressure will shorten the life of the tool due to excessive wear.
- The air hose must be rated at least 150% of the maximum operating pressure of the tool.

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## BEFORE USE

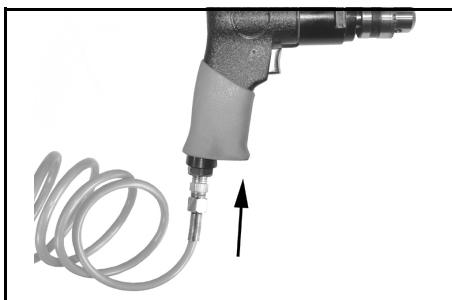
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**WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND COMPRESSED AIR SUPPLY.**

**NOTE:** Ensure the compressor is turned off.

1. Remove the travel plug from the airline socket.
2. Pour 2-3 drops of CLARKE airline oil into the air inlet. This should be done regardless of whether or not a lubricated air supply is to be used.
3. Connect a suitable hose to the air drill as shown, using the adapter supplied if required.
4. Connect the other end of the hose to the compressor.
5. Turn on the air supply and check for air leaks. Rectify any found before proceeding



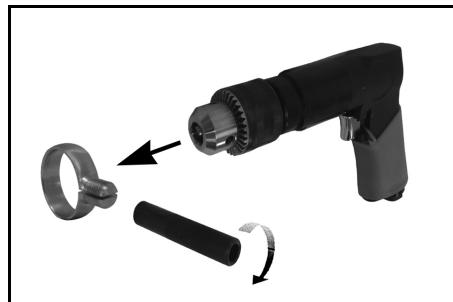
You can fit a whip hose with a quick fit coupling if required (available from your Clarke dealer.)

## FITTING THE HANDLE

The CAT123 is supplied with a removable side handle. To install it proceed as follows.

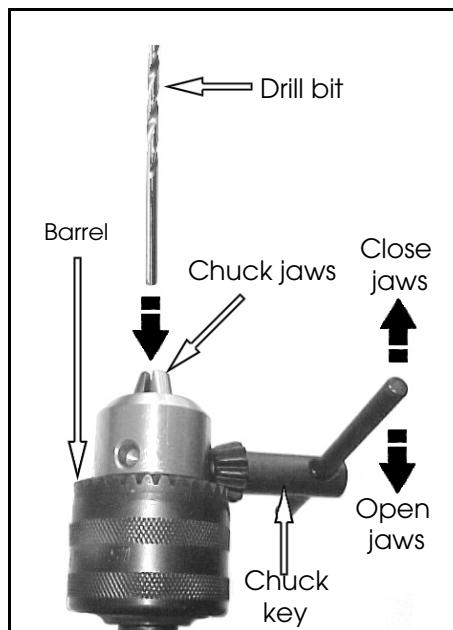
1. Slide the clamping ring over the body of the drill.
2. Screw the handle onto the threaded part of the clamping ring until the handle assembly is tight.

The handle can be located at any position around the drill by loosening the handle grip and re-tightening to secure in position.



## INSERTING/REMOVING THE DRILL BIT

1. Open the chuck jaws by inserting the chuck key in one of the holes in the chuck and turning it as shown.
2. Make sure that the head of the chuck key is located on the barrel of the chuck.
3. Turn the chuck key until the chuck jaws are open sufficiently to take the drill bit.
4. Place the drill bit in the jaws of the chuck as far as it will go.
5. Close the chuck jaws and tighten to grip the drill bit by turning the chuck key as shown.
6. Make sure that the chuck jaws are fully closed and that the drill bit is held firmly.
7. Your air drill is now ready for use.



# OPERATION

## OPERATING THE AIR DRILL



**WARNING: MAKE SURE THAT THE CHUCK KEY HAS BEEN REMOVED BEFORE USING THE DRILL.**

1. Squeeze the trigger switch to start the drill.
2. Wait until the drill is running at its maximum speed before applying it carefully to the workpiece.
3. Release the trigger switch to stop the drill.
4. To change the direction of rotation move the lever on the left side of the drill body from F to R.
5. Always ensure the drill has stopped before putting it down.



## DISCONNECTING THE AIR SUPPLY

Do not disconnect the air supply hose until the compressor has been shut down and the compressed air pressure released.

1. Refer to the compressor instruction book for the procedures to shut down and release the compressed air.
2. Once the pressure has been released, disconnect the air supply hose from the air drill.

## STORAGE

1. Store the air drill safely in a dry, secure environment.
2. If the tool is not to be used for longer than 24 hours, run a few drops of CLARKE airline oil into the air inlet and run the tool for a few seconds to ensure that the oil has been well distributed throughout the tool.
3. When storing, ensure the blanking plug is replaced on the airline inlet connector once the airline has been disconnected.

## TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	1. Excessive pressure on drill. 2. Motor parts worn. 3. Worn or sticking mechanism due to lack of lubricant.	1. Reduce the force applied to the drill. 2. Return to Clarke dealer for repair. 3. Drip air tool lubricating oil into air inlet. Allow oil to soak moving parts before using.
Tool runs slowly. Air flows weakly from exhaust.	1. Motor parts jammed with gum/dirt. 2. Regulator in closed position. 3. General airflow blocked by dirt.	1. Examine inlet air filter for cleanliness. 2. Adjust regulator to open position. 3. Operate tool in short bursts.
Tool will not run. Air flows freely from exhaust.	1. Motor vanes stuck due to buildup of foreign material.	1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Tap motor housing gently with a rubber mallet. 4. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.
Tool will not shut off.	1. Throttle O-rings damaged or ill-fitting in seat.	1. Return to Clarke dealer for repair.

# MAINTENANCE



**WARNING: MAKE SURE THAT THE AIR DRILL IS DISCONNECTED FROM THE AIR SUPPLY BEFORE STARTING ANY CLEANING, OR MAINTENANCE PROCEDURES.**

## DAILY

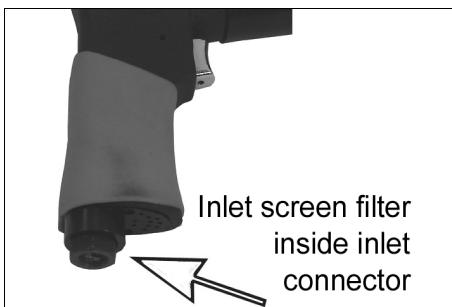
- Drain any water from the air tank, airline, and compressor.
- Pour a few drops of CLARKE air line oil, into the air inlet. This should be carried out regardless of whether or not an air line lubricator is used. If an airline lubricator is not used, this procedure should be repeated after every two to three hours of use.

## WEEKLY

- Check the air inlet screen filter and clean if necessary. It may be necessary to unscrew the air inlet connector to achieve this.

## CLEANING

- Keep the body of the air drill clean and free from debris, grit or gum deposits in the tool may reduce efficiency.
- After extensive use, remove the inlet screen filter and flush out the mechanism with gum solvent oil or an equal mixture of SAE No10 oil and paraffin. Allow to dry before use.



## SERVICE AND REPAIR

- Major servicing and repairs should be carried out by a qualified service technician.

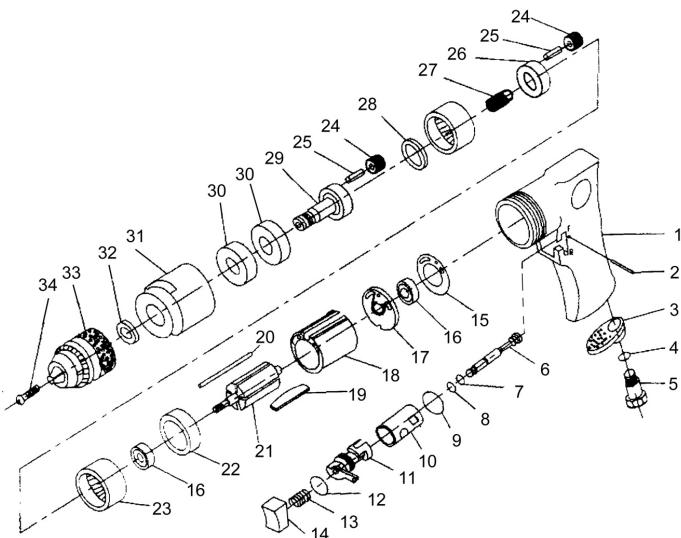
## PERFORMANCE

- Please note that factors outside the tool may effect its operation and efficiency such as reduced compressor output, excessive drain on the airline, moisture or restrictions in the line, or the use of connectors of improper size or poor condition which will reduce air supply.
- \*\*Clarke air line oil (Part no. 3050825) is available from your CLARKE dealer.

## SPECIFICATIONS

Feature	Specification
Model Number	CAT123
Min. Hose Size (ID)	10 mm
Average Air Consumption	16 cfm
Operating Air Pressure	90 psi (6.2 bar)
Chuck Size	1.5 - 13 mm
Maximum Speed	700 rpm
Sound Pressure Level (L <sub>pA</sub> dB)	81.9 dB(A)
Sound Power Level (L <sub>wA</sub> dB)	92.9 dB(A)
Vibration Levels	1.2 m/s <sup>2</sup> at the Main Handle K = 34.44
Dimensions (L x W x H)	208 x 49 x 150 mm
Weight	1.8 kg

## PARTS LIST & DIAGRAM



No	Description	Part No
1	Housing	RONCAT12301
2	Roll Pin	RONCAT12302
3	Exhaust Deflector	RONCAT12303
4	O-Ring	RONCAT12304
5	Air Inlet	RONCAT12305
6	Valve Stem	RONCAT12306
7	O-Ring	RONCAT12307
8	O-Ring	RONCAT12308
9	O-Ring	RONCAT12309
10	Bushing	RONCAT12310
11	Reverse Gear	RONCAT12311
12	O-Ring	RONCAT12312
13	Spring	RONCAT12313
14	Trigger	RONCAT12314
15	O-Ring	RONCAT12315
16	Bearing	RONCAT12316
17	End Plate	RONCAT12317

No	Description	Part No
18	Cylinder	RONCAT12318
19	Rotor Blade	RONCAT12319
20	Steel Wire	RONCAT12320
21	Rotor	RONCAT12321
22	Front Plate	RONCAT12322
23	Gear Wheel	RONCAT12323
24	Idle Gear	RONCAT12324
25	Idler Gear Pin	RONCAT12325
26	Gear Shaft	RONCAT12326
27	Wheel Pin	RONCAT12327
28	Washer	RONCAT12328
29	Gear Shaft	RONCAT12329
30	Bearing	RONCAT12330
31	Clamp Nut	RONCAT12331
32	Washer	RONCAT12332
33	Chuck	RONCAT12333
34	Chuck Screw	RONCAT12334

# DECLARATION OF CONFORMITY



Hemnall Street, Epping, Essex CM16 4LG

## DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

2006/42/EC      Machinery Directive.

The following standards have been applied to the product(s):

EN 792-3:2000+A1

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2008

**Product Description:**      1/2 Reversible Air Drill

**Model number(s):**      CAT123

**Serial / batch Number:**      N/A

**Date of Issue:**      08/09/2010

Signed:



J.A. Clarke  
Director

# A SELECTION FROM THE VAST RANGE OF

# Clarke®

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